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PTO/SB/08a (08-06)

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Substitute for form 1449b(PTO)

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

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Sheet 1 of 3

**Complete if Known**

Application Number	09/972,428
Filing Date	5 October 2001
First Named Inventor	Christophe Pierrat et al.
Group Art Unit	1756
Examiner Name	John S. Ruggles
Attorney Docket Number	NMTI 1002-4

**OTHER PRIOR ART -- NDN PATENT LITERATURE DOCUMENTS**

Examiner Initials	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume/issue number(s), publisher, city and/or country where published.	PT
	C1	SAKATA, MIWA, et al., "A Novel Radiation Sensitive Spin-on-glass Convertible into SiO <sub>2</sub> and the Simple Fabrication Process Using It," 26 July 1993* (*ATTI Bell Labs fax date), 3 pages.	
	C2	PISTOR, THOMAS V., "Rigorous 3D Simulation of Phase Defects in Alternating Phase-Shifting Masks," Proceedings of SPIE 4562-1038 (March 2002), 13 pages	
		OGAWA, KIYOSHI, et al., "Phase Defect Inspection by Differential Interference," Proceedings of SPIE 4409-71, 26 April 2001, 12 pages.	
		RHYNS, P., et al., "Characterization of Quartz Etched PSM Masks for KrF Lithography at the 100 nm node," Proceedings of SPIE 4562 (March 2002), 486-495.	
		SEWELL, HARRY, et al., "An Evaluation of the Dual Exposure Technique," (As early as 2002*), 11 pages *The date is based on references 8&9 of the article of 16 Feb 2001 and 27 Feb 2002, respectively.	
		WANG, RUOPING, et al., "Polarized Phase Shift Mask: Concept, Design, and Potential Advantages to Photolithography Process and Physical Design," Proceedings of SPIE 4754-105, 25 April 2002, 12 pages.	
		MATSUOKA, et al., "Application of Alternating Phase-Shifting Mask to 0.16um CMOS Logic Gate Patterns," SPIE Proc. 3051, March 10-14, 1997, 10 pages.	
		SEMMER, ARMIN, et al., "Application of 3D EMF Simulation for Development and Optimization of Alternating Phase Shifting Masks," Proc. of SPIE 4346-37, 1 March 2001, 12 pages.	
		WONG, ALFRED K., "Polarization Effects in Mask Transmission," Proc. of SPIE 1674, 8 March 1992, 8 pages.	
		ACKMANN, PAUL, et al., "Phase Shifting and Optical Proximity Corrections to improve CD control on Logic Devices in Manufacturing for sub 0.35 um I-Line," Proc. of SPIE 3051-07, March 1997, 8 pages.	
		SPENCE, C., et al., "Detection of 60 degree Phase defects on Alternating PSMs," Proc. of SPIE 3412-73, April 1998, 2 pages.	

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PTO/59/088 (28-03)  
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Substitute for form 1449BPTO <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> (use as many sheets as necessary)		<b>Complete if Known</b>	
Application Number	69/972,428	Application Number	69/972,428
Filing Date	5 October 2001	Filing Date	5 October 2001
First Named Inventor	Christophe Pierrat et al.	First Named Inventor	Christophe Pierrat et al.
Group Art Unit	1756	Group Art Unit	1756
Examiner Name	John S. Ruggles	Examiner Name	John S. Ruggles
Attorney Docket Number	NMTI 1002-4	Attorney Docket Number	NMTI 1002-4
Sheet	2	of	3

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS			
Examiner Initials	Cite No. 1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume/issue number(s), publisher, city and/or country where published	TP
		SUGAWARA, MINORU, et al., "Defect printability study of attenuated phase-shifting masks for specifying inspection sensitivity," Proc. SPIE 2621-49, September 1995, 16 pages	
		SCHMIDT, REGINA, et al., "Impact of Coma on CD Control for Multiphase PSM Designs," Proc. SPIE 3334-02, February 1998, 11 pages	
		ERDMANN, ANDREAS, "Topography effects and wave aberrations in advanced PSM-technology," Proc. SPIE 4346-36, 1 March 2001, 28 pages	
		GRANIK, YURI et al., "CD variation analysis technique and its application to the study of PSM mask misalignment," Proc. SPIE 4186-94, September 2000, 9 pages	
		ISHIWATA, NAOYUKI et al., "Fabrication of Phase-Shifting Mask," Proc. SPIE 1463, March 1991, 11 pages	
		LEVENSON, MARC D., et al., "Phase Phirst! An improved strong-PSM paradigm," Proc. SPIE 4186-42, September 2000, 10 pages	
		LEVENSON, MARC. D., et al., "SCAA mask exposures and Phase Phirst design for 110nm and below," Proc. SPIE 4346-817, September 2001, 10 pages	
		MORIKAWA, YASUTAKA, et al., "100nm-Air-PSM structure discussion for ArF lithography," Proc. SPIE 4409-22, April 2001, 15 pages	
		OZAKI, T., et al., "A 0.15um KrF Lithography for 1Gb DRAM Product using Highly Printable Patterns and Thin Resist Process," 1998 Symposium on VLSI Technology, June 1998, Honolulu, Hawaii, 2 pages	
		RONSE, KURT, et al., "Comparison of various phase shift strategies and application to 0.35 um ASIC designs," Proc. SPIE 1927, 1993, 15 pages	
		ROSENBLUTH, ALAN E., et al., "Optimum Mask and Source Patterns to Print a Given Shape," Proc. SPIE 4346-49, 1 March 2001, 17 pages	

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**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

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Sheet 3 of 3

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Application Number	09/972,428
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First Named Inventor	Christophe Pierrat et al.
Group Art Unit	1756
Examiner Name	John S. Ruggles
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		SUZUKI, AKIYOSHI, et al., "Multilevel imaging system realizing k1=0.3 lithography," Proc. SPIE 3679-36, March 1999, 13 pages.	
		VANDENBERGHE, G., et al., "(Sub-) 100nm gate patterning using 248nm alternating PSM," Mentor Graphics White Paper, May 2001, 9 pages.	
		FRITZE, M., et al., "100-nm Node Lithography With KrF" 1 February 2001, 14 pages.	
		FUKUDA, HIROSHI, et al., "Patterning of Random Interconnect Using Double Exposure of Strong-Type PSMs," Proc. SPIE 4346-695, September 2001, 8 pages.	
		FERGUSON, RICHARD A., et al., "Pattern-Dependent Correction of Mask Topography Effects for Alternating Phase-Shifting Masks," Proc. SPIE 2440-349, May 1995, 12 pages.	
		TOUBLAN, OLIVIER, et al., "Phase and Transmission Errors Aware OPC Solution for PSM: Feasibility Demonstration," Proc. SPIE 4186-95, 13 September 2000, 7 pages.	
		YANAGISHITA, YUICHIRO, et al., "Phase-Shifting Photolithography Applicable to Real IC Patterns," Proc. SPIE 1463, 3 March 1991, 11 pages.	
		PIERRAT, C., "Investigation of Proximity Effects in Alternating Aperture Phase Shifting Masks," September 2000, 11 pages.	
		COTE, MICHEL, et al., "A Practical Application of Full-Feature Alternating Phase-Shifting Technology for a Phase-Aware Standard-Cell Design Flow," 1 June 2001, 6 pages.	
		HANYU, ISAMU, et al., "New phase-shifting mask with highly transparent SiO2 phase shifters," Proc. SPIE 1264-167, June 1990, pages 166-177.	
		MCCALLUM, MARTIN, et al., "Alternating PSM Mask Performance - A Study of Multiple Fabrication Technique Results," Proc. SPIE 4346-723, September 2001, 6 pages.	

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